

Title (en)
Semiconductor device manufactured by a transferring method

Title (de)
Halbleiteranordnung hergestellt durch ein Transferverfahren

Title (fr)
Dispositif semi-conducteur fabriqué par une méthode de transfer

Publication
EP 1435653 A3 20171213 (EN)

Application
EP 03029755 A 20031223

Priority
JP 2002379578 A 20021227

Abstract (en)
[origin: EP1435653A2] A technique for forming a TFT element over a substrate having flexibility typified by a flexible plastic film is tested. When a structure in which a light-resistant layer or a reflective layer is employed to prevent the damage to the delamination layer, it is difficult to fabricate a transmissive liquid crystal display device or a light emitting device which emits light downward. A substrate and a delamination film are separated by a physical means, or a mechanical means in a state where a metal film formed over a substrate, and a delamination layer comprising an oxide film including the metal and a film comprising silicon, which is formed over the metal film, are provided. Specifically, a TFT obtained by forming an oxide layer including the metal over a metal film; crystallizing the oxide layer by heat treatment; and performing delamination in a layer of the oxide layer or at both of the interface of the oxide layer is formed.

IPC 8 full level
G02F 1/1333 (2006.01); **H01L 21/762** (2006.01); **G02F 1/136** (2006.01); **G02F 1/1368** (2006.01); **G09F 9/30** (2006.01); **H01L 21/00** (2006.01); **H01L 21/02** (2006.01); **H01L 21/336** (2006.01); **H01L 21/68** (2006.01); **H01L 21/77** (2006.01); **H01L 21/84** (2006.01); **H01L 27/12** (2006.01); **H01L 29/76** (2006.01); **H01L 29/786** (2006.01)

CPC (source: EP KR US)
H01L 21/76251 (2013.01 - EP US); **H01L 27/1214** (2013.01 - EP US); **H01L 27/1218** (2013.01 - US); **H01L 27/1248** (2013.01 - US); **H01L 27/1266** (2013.01 - EP US); **H01L 29/786** (2013.01 - KR); **H01L 29/78603** (2013.01 - EP US); **H01L 33/24** (2013.01 - US); **H01L 33/44** (2013.01 - US); **H01L 33/56** (2013.01 - US); **H01L 33/62** (2013.01 - US); **H01L 2221/68368** (2013.01 - EP US)

Citation (search report)
• [XAI] JP S61231714 A 19861016 - NIPPON TELEGRAPH & TELEPHONE
• [A] US 2002146893 A1 20021010 - SHIMODA TATSUYA [JP], et al

Cited by
US7994607B2; US7588969B2; US8058083B2; WO2006011664A1; US8822272B2; US9261554B2; WO2006022169A1; US8288773B2; US8790994B2; US7591863B2; US8981524B2; US9356030B2; US7927971B2; US8530335B2; US9269817B2; US9941115B2; US9947568B2; US10038012B2; US10636692B2; US11355382B2; US8830413B2; US9013650B2; US9299879B2; US10361221B2; US10411038B2; US10692891B2; US10985186B1; US11018159B2; US11476280B2; US11824060B2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

Designated extension state (EPC)
AL LT LV MK

DOCDB simple family (publication)
EP 1435653 A2 20040707; EP 1435653 A3 20171213; CN 100539190 C 20090909; CN 101615592 A 20091230; CN 101615592 B 20110105; CN 101615593 A 20091230; CN 101615593 B 20110518; CN 1516288 A 20040728; JP 2004214281 A 20040729; JP 4373085 B2 20091125; KR 101088104 B1 20111129; KR 20040060798 A 20040706; TW 200421493 A 20041016; TW 200715419 A 20070416; TW 201001564 A 20100101; TW 201430963 A 20140801; TW 201545243 A 20151201; TW I330871 B 20100921; TW I333244 B 20101111; TW I445097 B 20140711; TW I508193 B 20151111; TW I606521 B 20171121; US 10038012 B2 20180731; US 2004129960 A1 20040708; US 2010248402 A1 20100930; US 2013029447 A1 20130131; US 2014203415 A1 20140724; US 2016104725 A1 20160414; US 2017243895 A1 20170824; US 2018308867 A1 20181025; US 7723209 B2 20100525; US 8247246 B2 20120821; US 8691604 B2 20140408; US 9269817 B2 20160223; US 9543337 B2 20170110

DOCDB simple family (application)
EP 03029755 A 20031223; CN 200310124242 A 20031229; CN 200910161413 A 20031229; CN 200910161414 A 20031229; JP 2002379578 A 20021227; KR 20030097376 A 20031226; TW 103114662 A 20031219; TW 104128393 A 20031219; TW 92136257 A 20031219; TW 95147711 A 20031219; TW 98127268 A 20031219; US 201213587111 A 20120816; US 201414223419 A 20140324; US 201514961043 A 20151207; US 201715397045 A 20170103; US 201816017258 A 20180625; US 74050103 A 20031222; US 76631810 A 20100423